Departmental Seminar Series

You are cordially invited to a PhD public lecture presented by:

B M Parveen Beebeejaun-Boodoo

Ionic- and coordination hybrids of metal halides and n-methylpyridine derivatives

Organic-inorganic hybrid materials comprised of a nitrogen-containing organic component and a metal halide as inorganic component are of interest in Materials Science since the composite hybrid material retains the properties of the individual building blocks. These materials are known to exhibit rich structural diversity, and interesting physical properties.

The study focussed on the synthesis, structural and optical characterisation of a number of ionic- and coordination hybrid compounds, combining a range of divalent metal halides with n-methylpyridine derivatives, including the fluorophores 1,8-naphthalimide and naphthalene diimide.

A diverse range of hybrid compounds were obtained, including complexes, one-dimensional polymers, cluster compounds, metallocycles and metal-organic frameworks. It was found that the fluorescence properties of the hybrids may be modulated through the choice of metal ion employed in the inorganic component, even if the organic and inorganic components are not directly bonded. In addition, it was found that the choice of solvent could also be used to control the fluorescence of coordination hybrid materials.

The phenomenon of obtaining different organic-inorganic hybrids *via* self-assembly as products from the same combination of organic and inorganic components as reagents was also investigated. The specific product formed was found to be a function of either the solvent employed, the stoichiometric ratio, or the reaction temperature.

Date: Wednesday, 7 August 2019
Time: 11:30
Venue: The Orbital, Chemistry Building, Room 3.1
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